P.1 Overview of Development and Demonstration of Environmental Technologies at Florida International University's Hemispheric Center for Environmental Technology

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Abstract

Florida International University's Hemispheric Center for Environmental Technology (FIU-HCET) was established in 1995 by the University and the United States Department of Energy-Office of Science and Technology (DOE-OST) to research, develop, and demonstrate innovative environmental technologies and to establish alliances that support the implementation of these technologies. FIU-HCET's research and development (R&D) activities support U.S. Department of Energy Environmental Management (DOE-EM) Program in the areas of deactivation and decommissioning; mixed waste; characterization, monitoring, and sensor technology; subsurface contamination monitoring; radioactive tank waste remediation; and international technology integration. FIU-HCET has established a reputation for cost-effective, non-biased, independent testing of innovative environmental technologies. Since many environmental problems in the Western Hemisphere cannot currently be resolved using existing technologies, progress in technology innovation is a logical extension of the problem-resolution process.

FIU-HCET forms partnerships with small businesses and inventors, assisting them in the evaluation of the market potential and, if warranted the development of their new technology concepts. These partnerships result in a greater opportunity for technology demonstrations, provide access to potential funds for demonstrations and commercialization, and increase the commercial sector's access to federally developed technologies.

FY02 Projects

The projects proposed by FIU-HCET for FY02 aim to make technical advances, achieve cost savings, and facilitate technical implementation to benefit the DOE-EM Program. In FY02 FIU-HCET is executing projects to support work got the Deactivation and Decommissioning Focus Area, the Tanks Focus Area, the Transuranic and Mixed Waste Focus Area and the Department's International Programs. The specific projects to be discussed in this presentation include:

- D&D Focus Area
  - D&D Technology Assessment Program
  - D&D Technology Information Management and Dissemination
  - D&D Tool and Sensor Applied Research and Development
  - D&D Tool and Sensor Delivery Platform Applied Research and Development
  - Deployment of D&D Technologies
  - Long Term Monitoring and Stewardship of Nuclear Facilities
  - Aerosol Research and Modeling to Support D&D Operations
- Tanks Focus Area
  - Plugging Prevention and Unplugging of Waste Slurry Transfer Pipelines
  - Solids Formation and Feed Stability During Waste Slurry Transfer and Saltcake Dissolution Study
  - Simulant Characterization for Tank Waste Slurry Transfer
  - Demonstration and Evaluation of Potential Glass-Fracturing Technologies for SRS
  - Center of Expertise for the Development and Deployment of Tank slurry Monitoring (Dual Coriolis)
  - Sludge Mapping and Volume Estimates
  - Tank Integrity Inspection Techniques
- Transuranic & Mixed Waste Focus Area
  - Unique Waste Treatment Technology Development and Alternatives to Incineration Support
  - Waste Treatment Effluent Monitoring Technology Assessment